

Datasheet for 600-401-MROS**Insulin Receptor phospho Y1361 Antibody****Overview**

Description:	Anti-Insulin Receptor pY1361 (RABBIT) Antibody - 600-401-MROS
Item No.:	600-401-MROS
Size:	25 µL
Applications:	Dot Blot, ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details**Background:**

Receptor tyrosine kinase which mediates the pleiotropic actions of insulin. Binding of insulin leads to phosphorylation of several intracellular substrates, including, insulin receptor substrates (IRS1, 2, 3, 4), SHC, GAB1, CBL and other signaling intermediates. Each of these phosphorylated proteins serve as docking proteins for other signaling proteins that contain Src-homology-2 domains (SH2 domain) that specifically recognize different phosphotyrosine residues, including the p85 regulatory subunit of PI3K and SHP2. Phosphorylation of IRSs proteins lead to the activation of two main signaling pathways: the PI3K-AKT/PKB pathway, which is responsible for most of the metabolic actions of insulin, and the Ras-MAPK pathway, which regulates expression of some genes and cooperates with the PI3K pathway to control cell growth and differentiation. Binding of the SH2 domains of PI3K to phosphotyrosines on IRS1 leads to the activation of PI3K and the generation of phosphatidylinositol-(3, 4, 5)-triphosphate (PIP3), a lipid second messenger, which activates several PIP3-dependent serine/threonine kinases, such as PDK1 and subsequently AKT/PKB. The net effect of this pathway is to produce a translocation of the glucose transporter SLC2A4/GLUT4 from cytoplasmic vesicles to the cell membrane to facilitate glucose transport. Moreover, upon insulin stimulation, activated AKT/PKB is responsible for: anti-apoptotic effect of insulin by inducing phosphorylation of BAD; regulates the expression of gluconeogenic and lipogenic enzymes by controlling the activity of the winged helix or forkhead (FOX) class of transcription factors. Another pathway regulated by PI3K-AKT/PKB activation is mTORC1 signaling pathway which regulates cell growth and metabolism and integrates signals from insulin. AKT mediates insulin-stimulated protein synthesis by phosphorylating TSC2 thereby activating mTORC1 pathway. The Ras/RAF/MAP2K/MAPK pathway is mainly involved in mediating cell growth, survival and cellular differentiation of insulin. Phosphorylated IRS1 recruits GRB2/SOS complex, which triggers the activation of the Ras/RAF/MAP2K/MAPK pathway. In addition to binding insulin, the insulin receptor can bind insulin-like growth factors (IGFI and IGFI). Anti-Insulin Receptor pY1361 Antibody is useful for researchers interested in Donohue Syndrome, Insulin-Resistant

Diabetes Mellitus, RET signaling, AMP-activated Protein Kinase (AMPK) Signaling Pathways, and protein tyrosine kinase activity.

Synonyms:	Insulin Receptor, EC 2.7.10.1, IR, CD220 Antigen, HHF5, Rabbit anti-Insulin receptor, INSR
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	INSR
Reactivity:	Human
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Insulin Receptor pY1361 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-Terminal portion near the phosphorylation Y1361 of the human Insulin Receptor conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against human Insulin Receptor. Rabbit Anti-Insulin Receptor pY1361 Antibody was prepared from monospecific antiserum by delipidation and defibrination, affinity purification, followed by cross adsorption. This phospho specific polyclonal antibody is specific for pY1361 human Insulin Receptor. Reactivity with non-phosphorylated Y1361 is minimal. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence to human, rat, mouse, and xenopus laevis.
Relevant Links:	UniProtKB - P06213 NCBI - NP_000199.2 GeneID - 3643

Application Details

Tested Applications:	Dot Blot, ELISA, WB
Application Note:	Anti-Insulin Receptor pY1361 Antibody has been tested in ELISA, Dot Blot, and Western Blot. This antibody may be suitable for Immunofluorescence and Immunohistochemistry. Expect ~156kDa in appropriate tissues or lysates on western blots.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

ELISA:	1:10,000-1:50,000
IF:	User Optimized
IHC:	User Optimized
WB:	1:1000

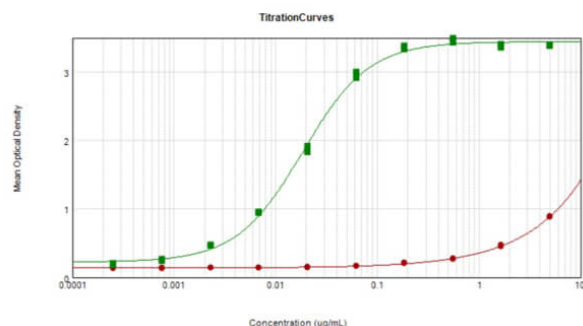
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

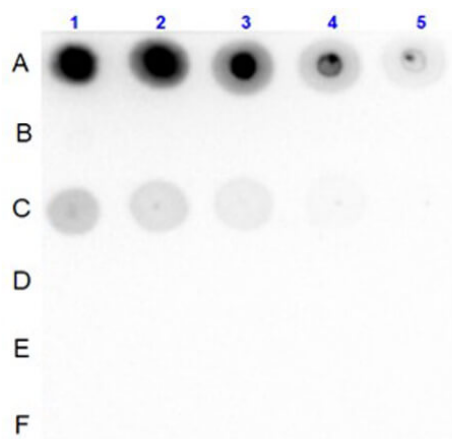
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



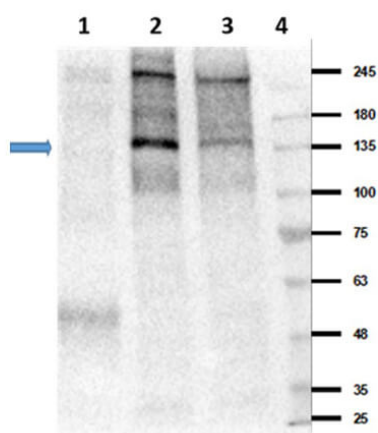
ELISA

ELISA results of purified Rabbit Anti-Insulin Receptor pY1361 Antibody tested against BSA-conjugated peptide of immunizing peptide pY1361 (green) and non-phospho Y1361 (red). Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/mL and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% Fish Gel/PBS Blocking Buffer (p/n MB-066-0100), Goat Anti-Rabbit IgG HRP conjugated (p/n 611-103-122) and TMB substrate (p/n TMBE-1000).



Dot Blot

Dot Blot of Rabbit Anti-Insulin Receptor pY1361 Antibody. Column Load: 1) 100ng, 2) 33.33ng, 3) 11.11ng, 4) 3.70ng, 5) 1.23ng. Rows: (A) Insulin Receptor pY1361 - BSA Peptide. (B) Insulin Receptor Y1361 - BSA Peptide. (C) STAT3 pY705 - BSA Peptide. (D) STAT3 Y705 - BSA Peptide. (E) Scrambled- BSA Peptide. (F) BSA. Primary Antibody: Anti-Insulin Receptor pY1361 at 1µg/mL overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP conjugated antibody (p/n 611-103-122) at 1:70,000. Blocking: Universal Buffer (p/n MB-073). Exposure: 10sec.



Western Blot

Western Blot of Rabbit Anti-Insulin Receptor pY 1361 Antibody. Lane 1: Human Thymus Tissue Lysate [35µg] [-]. Lane 2: HepG2 Lysate (p/n W09-001-GJ5) [35µg] [+]. Lane 3: MCF-7 Lysate (p/n W09-000-360) [35µg] [low]. Lane 4: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Primary Antibody: Anti-Insulin Receptor pY1361 at 1:1000 at overnight 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:70,000. Predicted MW: ~156kDa. Observed MW: ~140kDa. Exposure: 5sec.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.